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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/426,654 | 10/25/1999 | KENJI NEMOTO | FUJR-16.535 | 2188 |

7590 01/08/2003

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| EXAMINER |
|---|
| PEREZ GUTIERREZ, RAFAEL |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2683 | |

DATE MAILED: 01/08/2003

4
Remailed

Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

| Application No. | Applicant(s) |
|---|---|
| 09/426,654 | Nemoto |
| **Examiner** | **Art Unit** |
| Rafael Perez-Gutierrez | 2683 |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on *Oct 25, 1999* .

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-15* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

**Application Papers**

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *Oct 25, 1999* is/are a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☒ All b) ☐ Some* c) ☐ None of:

1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Specification*

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The following title is suggested: --**RADIO COMMUNICATION SYSTEM AND METHOD FOR CALCULATING TRANSMISSION TIMING BETWEEN A TERMINAL UNIT AND A BASE STATION BASED UPON LOCATION, DISTANCE, OR PROPAGATION TIME**--.

### *Claim Objections*

3. **Claims 1, 6, 7, 9, 14, and 15** are objected to because of the following informalities:

a) On **line 14** of **claim 1**, on **line 7** of **claim 6**, on **line 11** of **claim 7**, on **line 18** of **claim 9**, on **line 15** of **claim 14**, and on **line 13** of **claim 15**, insert --a-- before "signal"; and

b) On **lines 6 and 12** of **claim 9**, on **lines 6 and 10** of **claim 14**, and on **line 4** of **claim 15**, insert --a-- before "location". Appropriate correction is required.

*Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office Action:

> A person shall be entitled to a patent unless -- (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. **Claims 1, 2, and 5-8** are rejected under 35 U.S.C. 102(e) as being anticipated by **Yoshida et al. (U.S. Patent # 6,233,257 B1)**.

Consider **claims 1 and 5-7**, Yoshida et al. clearly show and disclose a wireless local loop (WLL) system 50 (radio communication system) (figure 1A) and method for performing radio communication control, comprising:

a propagation information calculation device (not shown but inherent) arranged in radio base station 100 (figure 1A) and including continuous time slot allocating means (not shown but inherent) for continuously allocating time slots in a frame 200 (figures 2A-3B) to generate a continuous time slot (e.g., time slot 204 with guard time 302 and time slot 212 with guard time

320 (figures 3A and 3B)) (column 4 lines 12-16, column 4 line 54 - column 5 line 29, and column 6 lines 38-48) and propagation information calculating means (not shown but inherent) for communicating with a WLL personal station 102 (terminal unit) (figure 1A) during a period of the continuous time slot to calculate propagation information about radio wave propagation between radio base station 100 and the WLL personal station 102 (terminal unit) (figure 1A) (abstract, figure 4A steps 412-416 414, figure 4B steps 432-436, figure 4C steps 412, 414, 454, and 456, column 2 lines 11-34, column 6 lines 19-37, column 8 line 48 - column 9 line 8, column 9 lines 30-52, and column 10 lines 3-14); and

a transmission timing calculation device (not shown but inherent) arranged in the WLL personal station 102 (terminal unit) (figure 1A) and including a transmission timing calculating means (not shown but inherent) for calculating, during the period of the continuous time slot and based on the propagation information, transmission timing for a signal to be transmitted from the WLL personal station 102 (terminal unit) to the radio base station 100 (figure 1A) (abstract, figure 4B steps 436 and 438, figure 4C steps 454-458, column 4 lines 23-28, column 9 lines 43-52, and column 10 lines 3-23) and signal transmitting means (not shown but inherent) for transmitting the signal in accordance with the transmission timing (abstract, step 418 in figures 4A and 4B, figure 4C step 460, column 3 lines 54-57, column 9 lines 53-58, and column 10 lines 23-28).

Consider **claims 2 and 8**, and **as applied to claims 1 and 7 above**, Yoshida et al. further disclose that, to calculate the propagation information, the propagation information calculating

device (not shown but inherent) measures a time from transmission of control data (test data) to the WLL personal station 102 (terminal unit) (figure 1A) to reception of the control data (test data) returned from the WLL personal station 102 (terminal unit) (figure 1A) and calculates a radio wave propagation time or distance between the radio base station and the WLL personal station 102 (terminal unit) (abstract, figures 1A and 4A-4C, and column 6 lines 19-37).

6. **Claims 9-15** are rejected under 35 U.S.C. 102(e) as being anticipated by **Goldman (U.S. Patent # 6,016,322)**.

Consider **claims 9-11 and 13-15**, Goldman clearly shows and discloses a radio communication method and system 200 (figure 2) for performing radio communication control, comprising:

a base station location information acquisition device arranged in a radio base station 206 (figure 2) and including a Global Positioning System (GPS) (satellite-assisted positioning system) (column 3 lines 10-13) receiver 208 (base station location information acquiring means) (figure 2) for acquiring base station location information which is information on a location of the radio base station 206 (column 3 lines 31-43), and a base station location information notifying means (combination of processing unit 213 and transmitter 214) (figure 2) for notifying the base station location information (figure 7A, column 4 lines 36-52, column 5 lines 21-30, and column 6 lines 29-42); and

a transmission timing calculation device arranged in a mobile station 204 (terminal unit)

(figure 2) and including a Global Positioning System (GPS) (satellite-assisted positioning system) (column 3 lines 10-13) receiver 208 (terminal location information acquiring means) (figure 2) for acquiring mobile station (terminal unit) location information which is information on a location of the mobile station 204 (terminal unit) (column 3 lines 31-43), a processing unit 212 (propagation information calculating means, transmission timing calculating means) (figures 2 and 3A) for calculating, based on the base station location information and the mobile station (terminal unit) location information, propagation information about radio wave propagation between the radio base station 206 and the mobile station 204 (terminal unit) and calculating, based on the propagation information, transmission timing for a signal to be transmitted from the mobile station 204 (terminal unit) to the radio base station 206 (abstract, figure 6, column 2 lines 14-34, column 4 lines 14-35, column 5 lines 6-30, and column 5 line 53 - column 6 line 28), and a transmitter 214 (signal transmitting means) (figure 2) for transmitting the signal in accordance with the transmission timing (column 6 lines 19-28).

Consider **claim 12**, and **as applied to claim 9 above**, Goldman further discloses that said transmission timing calculation device stores information on the calculated transmission timing in a non-volatile memory 304 (figure 3A, column 4 lines 18-35, and column 6 lines 20-22).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office Action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. **Claims 3 and 4** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yoshida et al. (U.S. Patent # 6,233,257 B1)**.

Consider **claim 3**, and **as applied to claim 1 above**, Yoshida et al. also disclose that the transmission timing calculating device (not shown) stores, in some kind of memory device, information on the calculated transmission timing (abstract and column 2 lines 33-35).

Although, Yoshida et al. do not specifically disclose that the information is stored in a nonvolatile memory, the Examiner takes Official Notice that it is notoriously well known in the art to use a nonvolatile memory to permanently store information that is used frequently.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time

the invention was made to specifically use a nonvolatile memory in Yoshida et al. to store the information on the calculated transmission timing in order to permanently store such information and reduce the system's processing time.

Consider **claim 4**, and **as applied to claim 1 above**, although Yoshida et al. does not disclose that the continuous time slot allocating means (not shown but inherent) cancels allocation of the continuous time slot after the transmission timing is calculated, a person of ordinary skill in the art at the time the invention was made would have clearly recognized that, by canceling the allocation of the continuous time slot after the transmission timing is calculated, substantial resources can be reused for increasing the capacity of the system.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to cancel the allocation of the continuous time slot after the transmission timing is calculated in order to reused resources to increase the capacity of the system.

***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

Oksala (U.S. Patent # 6,477,151 B1) discloses packet radio telephone services.

10. Any response to this Office Action should be **faxed to** (703) 872-9314 **or mailed to**:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**Hand-delivered responses** should be brought to

Crystal Park II
2021 Crystal Drive
Arlington, VA 22202
Sixth Floor (Receptionist)

11. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Rafael Perez-Gutierrez whose telephone number is (703) 308-8996. The Examiner can normally be reached on Monday-Thursday from 6:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, William G. Trost IV can be reached on (703) 308-5318. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700 or call customer service at (703) 306-0377.

*Rafael Perez-Gutierrez*
R.P.G./rpg RAFAEL PEREZ-GUTIERREZ
PATENT EXAMINER
November 18, 2002

WILLIAM TROST
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